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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/363,456 07/29/99 BENMAN

W VIRTUAL-2

EXAMINER

WM01/1031

WILLIAM J BENMAN  
INTEGRATED VIRTUAL NETWORKS  
2049 CENTURY PARK EAST  
SUITE 2740  
LOS ANGELES CA 90067

CAO, H

ART UNIT

PAPER NUMBER

2671

DATE MAILED:

10/31/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

# Office Action Summary

Application No.

09/363,456

Applicant(s)

BENMAN, WILLIAM J.

Examiner

Huedung X Cao

Art Unit

2671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 July 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitahara et al. (# 5,634,850) in view of Adelson (#5,706,417).

As per claim 1, Kitahara teaches the claimed “system for transplanting an image from a first scene to a second scene” comprising:

first means for providing image data (Kitahara, disk drive 10);

second means responsive to said first means for storing a first frame of image data consisting of a heterogeneous background scene (Kitahara, figure 5 – memory 24; col. 4, lines 43-53). It is noted that Kitahara does not disclose a heterogeneous as claimed; however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have a heterogeneous background scene so the users can have more choice to select a background that they want for the display image.

third means responsive to said first means for providing a second frame of image (Kitahara, moving image frame 13);

data consisting of a second scene having said background scene at least partially obscured by a foreground object (Kitahara, image in frame buffer 13 – figure 2); and

fourth means responsive to said second and third means for processing said second frame to extract an image of said object independent of said background scene which Kitahara does not explicitly disclose. However, Adelson teaches that the step of extract an image is widely teaches in the art (Adelson, separating an image sequence into a plurality of layers, col. 16, lines 34-39); thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made that the extracting technique can be used to take out a desired part of image frame can be used in order to efficiently deliver the foreground and background so that one of the other could be easily separated and changed.

Claim 2 adds into claim 1 “said fourth means includes means for comparing picture elements of said second frame to corresponding picture elements in said first frame and replacing each pixel element with a predetermined value (zero value, col. 6, lines 8-11) if the result of the comparison is a first value and outputting each picture element if the result of the comparison is a second value, wherein the second value is the complement of said first value” (unity value, col. 6, lines 12-15) which Adelson teaches col. 6, lines 8-14. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a comparing means for comparing picture element in order to decide whether if the desired picture will be outputted.

Claims 3 adds into claim 1 “means for inserting said image of said foreground object into a third scene” which Kitahara teaches in figure 11 and col. 7, lines 17-25.

Claim 4 adds into claim 3 “said third scene is computer generated” which Adelson teaches in col. 13, lines 39-63. It would have been obvious to one of ordinary skill in the art at the time the invention was made to generate the third scene by computer in order to develop a 3D model of the real, moving object.

Claim 5 adds into claim 4 “wherein said first scene is static” which Adelson teaches in col. 4, line 23.

Claim 6 adds into claim 4 “wherein said first scene is dynamic” which Adelson teaches in col. 10, lines 49-50.

Claim 17 is similar to claim 1; therefore they are rejected under a similar rationale.

*Allowable Subject Matter*

3. Claims 7-16 are allowed.

4. The following is an examiner's statement of reasons for allowance:

The prior art made of record fails to anticipate or make obvious the claimed invention.

Specifically, the prior art fails to teach, in combination with the remaining elements as recited in claim 7: a system for transplanting image comprising the step of:

first means for providing image data;

second means responsive to said first means for storing a first frame of image data consisting of a heterogeneous background scene; third means responsive to said first means for providing a second frame of image;

data consisting of a second scene having said background scene at least partially obscured by a foreground object; and

fourth means responsive to said second and third means for processing said second frame to extract an image of said object independent of said background scene;

fifth means for processing said difference frame to provide a template; and

sixth means for multiplying said second frame by said template to extract an image consisting essentially of said foreground object.

Although Kitahara et al. is directed at the image processing system by which foreground to be combined with a background can be displayed with natural motion and a realistic superimposed image can be displayed, Kitahara does not means for processing different frame to provide a template and means for multiplying said second frame by said template. While Chen's system for inspected to identify a first transformation of a scene depicted in the sequence of video image

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Double Patenting***

5. Claims 1-17 of this application conflict with claims 1-17 of Application No. 09/363,771. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Robinson et al. (#6,295,374 B1) teaches a method for detecting a flaw in a sample image.

Chauvin et al. (#5,886,701) teaches a graphics rendering device and method for operating same.

Kajiya (#5,864,342) teaches method for rendering graphical object to image chunks.

Itoh (#6,034,785) teaches an image synthesizing method.

Amemiya et al. (#5,970,183) teaches detecting an outer shape of an original image and controlling to inhibit image frame processing in accordance with the detection result.

***Inquires***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Huedung Cao** whose telephone number is **(703) 308-5024**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Mark Zimmerman**, can be reached at **(703) 305-9798**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

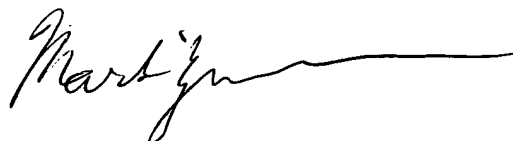
**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Huedung X. Cao  
Patent Examiner

  
**MARK ZIMMERMAN**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2600**